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| Notice of Allowability | Application No. | Applicant(s) | |
| | 09/830,860 | DANIELSSEN ET AL. | |
| | Examiner | Art Unit | |
| | Rip A. Lee | 1713 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--
 All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to January 13, 2004.
2. ☒ The allowed claim(s) is/are 1-20.
3. ☒ The drawings filed on June 26, 2003 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
 - * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|---|--|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413), Paper No./Mail Date _____. |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____ | 7. <input type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____. |

DETAILED ACTION

This office action follows a request for continued examination (RCE) under 37 § C.F.R. 1.114, filed on January 13, 2004. Applicants have amended claims 1, 3, 6, 7, and 14.

Allowable Subject Matter

The following is an examiner's statement of reasons for allowance: Claims 1-20 are allowed over the closest references, GB 2,210,882 to Clarke *et al.* and U.S. Patent No. 6,143,808 to Sack *et al.*

The present invention is drawn to a filler blend consisting of talc and microsilica in a 1:15 to 15:1 ratio, wherein said microsilica is amorphous, has a particle size of about 0.15 μ , and contains at least 70 wt % of SiO₂. Another aspect of the invention is a method of making a thermoplastic resin composition comprised of a thermoplastic resin and 3-400 wt % of a filler comprising a blend of talc and microsilica in a 1:15 to 15: 1 ratio.

Clarke *et al.* discloses an epoxy resin composition characterized by particulate filler of wide particle size distribution comprising the following fractions: (i) 2-35 % in the sub-micron range and/or (ii) 30-80 % in the 1-50 μ range and (iii) 5-40 % in the 50-250 μ range. The submicron particulate filler is present as particles substantially in the 0.1-1.0 μ range, an example being microsilica. The 1-50 μ fraction of the filler is quartz powder, fly ash, or talc, and the 50-250 μ fraction of the filler is sand or quartz grit. The reference does not teach specifically use of talc and microsilica in combination, and therefore, the filler blend itself, is not taught or suggested in the reference. The skilled artisan would not have found it obvious to arrive at the

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filler of the present invention based on the disclosure of Clarke *et al.* because the prior art filler necessarily contains three components.

Arguably, the composition of the present invention could be a limited embodiment of the generic claims of Clarke *et al.* (see comments, previous office action). Applicants have provided sufficient showing of an unexpected synergistic effect of the two materials when compounded in thermoplastic. Here, the resulting compositions have good tensile strength and impact strength. In light of the preponderance of evidence presented to date, it is concluded that the subject matter of the present claims is not obvious in light of the teachings of the prior art.

Sack *et al.* teaches a polymer composition comprising a particulate mineral carrier and polymer dispersion. The mineral carrier is at least one material selected from the group consisting of talc, microsilica, and mixtures thereof, and the polymer is selected from polymers based on vinyl chloride, butadiene, and isoprene. The reference does not teach specifically the use of both talc and microsilica in the 1:15 to 15:1 ratio, as recited in the present claims, and as discussed above, the subject matter of the present claims is not obvious from the general teachings of Sack *et al.*

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rip A. Lee whose telephone number is (571)272-1104. The examiner can be reached on Monday through Friday from 9:00 AM - 5:00 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu, can be reached at (571)272-1114. The fax phone number for the organization where this application or proceeding is assigned is (703)872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <<http://pair-direct.uspto.gov>>. Should you have questions on the access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll free).

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May 5, 2004



DAVID W. WU
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700